

**Notice of Allowability**

Application No.

09/746,677

Applicant(s)

OLSEN, GREGORY P.

Examiner

Thu Ha T. Nguyen

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on September 06, 2006.
2. ☒ The allowed claim(s) is/are 1-6 and 10-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 08/18/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

*Thu Ha T. Nguyen*

### Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Applicants' Representative, Mr. Paul A. Mendonsa (Reg. No. 42,879), on November 21, 2006.

3. The application has been amended as follow:

In the claims:

1. (Currently Amended) A method comprising:

- broadcasting a discovery request to network devices;
- estimating a number of network devices from responses received from the network devices;
- dividing target devices into subsets of target devices, wherein a subset to which a particular device belongs is determined based on a subset index value corresponding to results of a hash function performed with an identifier of the device and a number of subsets to which the target devices are divided;
- sending a second request;
- limiting subsets of target devices responsive to the second request, in part based on the second request including the number of subsets to which the target devices are

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divided and the subset index value, wherein the subset index value indicates a specific subset of the number of subsets to which the second message is targeted; and

varying a timing with which the second request is communicated to the subsets of target devices to result in the second request being sent to the multiple subsets at varying times.

2. (Previously Presented) The method of claim 1 wherein determining the subset of target devices comprises:

broadcasting over a network;

receiving one or more responses to the network broadcast from target devices coupled to the network;

estimating a number of devices coupled to the network; and

determining a number of subgroups based, at least in part, on the estimated number of devices coupled to the network.

3. (Previously Presented) The method of claim 1 wherein determining the subset of target devices comprises:

multicasting to a subset of a network;

receiving one or more responses from target devices of the subnet;

estimating a number of devices in the subnet; and

determining a number of subgroups based, at least in part, on the estimated number of devices in the subnet.

4. (Currently Amended) An physical article comprising a tangible machine-accessible medium to provide machine-readable instructions that, when executed, cause one or more electronic system to:

broadcast a discovery request to network devices;

estimate a number of network devices from responses received from the network devices;

divide target devices into subsets of target devices, wherein a subset to which a particular device belongs is determined based on a subset index value corresponding to results of a hash function performed with an identifier of the device and a number of subsets to which the target devices are divided;

send a second request;

limit subsets of target devices responsive to the second request, in part based on the second request including the number of subsets to which the target devices are divided and the subset index value, wherein the subset index value indicates a specific subset of the number of subsets to which the second message is targeted; and

vary a timing with which the second request is communicated to the subsets of target devices to result in the second request being sent to the multiple subsets at varying times.

5. (Previously Presented) The physical article of claim 4 wherein the instructions that cause the one or more electronic systems to determine the subset of target devices

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further comprises sequences of instructions that, when executed, cause the one or more electronic systems to:

- broadcast over a network;

- receive one or more responses from target devices coupled to the network;

- estimate a number of devices coupled to the network; and

- determine a number of subgroups based, at least in part, on the estimated number of devices coupled to the network.

6. (Previously Presented) The physical article of claim 4 wherein the instructions that cause the one or more electronic systems to determine the subset of target devices further comprises sequences of instructions that, when executed, cause the one or more electronic systems to:

- multicast to a subset of a network;

- receive one or more responses from target devices of the subnet;

- estimate a number of devices in the subnet; and

- determine a number of subgroups based, at least in part, on the estimated number of devices in the subnet.

7. (Cancelled).

8. (Cancelled).

9. (Cancelled).

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10. (Currently Amended) A method comprising:

broadcasting a discovery request to network devices;

estimating a number of network devices from responses received from the network devices;

dividing a set of target devices into multiple subsets of target devices, wherein the subset to which a particular device belongs is determined based on an identifier of the device;

sending a second request;

limiting subsets of target devices responsive to the second request, in part based on the second request including the number of subsets to which the target devices are divided and a subset index value, wherein the subset index value indicates a specific subset of the number of subsets to which the second message is targeted;

~~sending a second request;~~

performing a hash function with a unique identifier and the number of subsets to generate a hash result; and

responding to the second message if the hash result equals the hash the subset index value.

11. (Previously Presented) The method of claim 10 wherein determining the subset of target devices comprises:

broadcasting over a network;

receiving one or more responses from target devices coupled to the network;

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estimating a number of devices coupled to the network; and  
determining a number of subgroups based, at least in part, on the estimated number of devices coupled to the network.

12. (Previously Presented) The method of claim 10 wherein determining the subset of target devices comprises:

multicasting to a subset of a network;  
receiving one or more responses from target devices of the subnet;  
estimating a number of devices in the subnet; and  
determining a number of subgroups based, at least in part, on the estimated number of devices in the subnet.

13. (Currently Amended) A physical article comprising a tangible machine-accessible medium to provide machine-readable instructions that, when executed, cause one or more electronic system to:

broadcast a discovery request to network devices;  
estimate a number of network devices from responses received from the network devices;  
divide a set of target devices into multiple subsets of target devices, wherein the subset to which a particular device belongs is determined based on an identifier of the device;  
send a second request;

limit subsets of target devices responsive to the second request, in part based on the second request including the number of subsets to which the target devices are divided and a subset index value, wherein the subset index value indicates a specific subset of the number of subsets to which the second message is targeted;

~~send a second request;~~

perform a hash function with a unique identifier and the number of subsets to generate a hash result; and

respond to the second message if the hash result equals the hash the subset index value.

14. (Previously Presented) The physical article of claim 13 wherein the instructions that cause the one or more electronic systems to determine the subset of target devices further comprises sequences of instructions that, when executed, cause the one or more electronic systems to:

broadcast over a network;

receive one or more responses from target devices coupled to the network;

estimate a number of devices coupled to the network; and

determine a number of subgroups based, at least in part, on the estimated number of devices coupled to the network.

15. (Previously Presented) The physical article of claim 13 wherein the instructions that cause the one or more electronic systems to determine the subset of target devices



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further comprises sequences of instructions that, when executed, cause the one or more electronic systems to:

- multicast to a subset of a network;

- receive one or more responses from target devices of the subnet;

- estimate a number of devices in the subnet; and

- determine a number of subgroups based, at least in part, on the estimated number of devices in the subnet.

16. (Currently Amended) A tangible machine-accessible medium having electronic data signals stored therein, the medium to be shared among a plurality of network devices, wherein the electronic data signals comprise sequences of instructions that, when executed, cause one or more electronic systems to:

- broadcast a discovery request to network devices;

- estimate a number of network devices from responses received from the network devices;

- divide a set of target devices into multiple subsets of target devices, wherein the subset to which a particular device belongs is determined based on an identifier of the device;

- send a second request;

- limit subsets of target devices responsive to the second request, in part based on the second request including the number of subsets to which the target devices are

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divided and a subset index value, wherein the subset index value indicates a specific subset of the number of subsets to which the second message is targeted;

~~send a second request;~~

perform a hash function with a unique identifier and the number of subsets to

generate a hash result; and

respond to the second message if the hash result equals the hash the subset index value.

17. (Currently Amended) The tangible machine-accessible medium of claim 16 wherein the sequences of instructions that cause the one or more electronic systems to determine the subset of target devices further comprises sequences of instructions that, when executed, cause the one or more electronic systems to:

broadcast over a network;

receive one or more responses from target devices coupled to the network;

estimate a number of devices coupled to the network; and

determine a number of subgroups based, at least in part, on the estimated number of devices coupled to the network.

18. (Currently Amended) The tangible machine-accessible medium of claim 16 wherein the sequences of instructions that cause the one or more electronic systems to determine the subset of target devices further comprises sequences of instructions that, when executed, cause the one or more electronic systems to:

multicast to a subset of a network;  
receive one or more responses to from target devices of the subnet;  
estimate a number of devices in the subnet; and  
determine a number of subgroups based, at least in part, on the estimated  
number of devices in the subnet.

19-24. (Withdrawn).

#### **Reasons for Allowance**

4. Claims 1-6 and 10-18 are allowed.
5. Claims 7-9 and 19-24 are cancelled without prejudice.
6. This communication warrants no examiner's reason for allowance, as applicant's reply makes evident the reason for allowance, satisfying the record as whole as required by rule 37 CFR 1.104 (e). In this case, the substance of applicant's remarks filed on September 06, 2006 with respect to the amended claim limitations point out and make clear the reason claims are patentable over the prior art of record. Thus, the reason for allowance is in all probability evident from the record and no statement for examiner's reason for allowance is necessary (see MPEP 13202.14).
7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

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preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571) 272-3989. The examiner can normally be reached Monday through Friday from 8:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh, can be reached at (571) 272-4006.

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ThuHa Nguyen

Primary Examiner  
November 24, 2006